

In the Claims:

Amend claims 18 and 27 as follows, and add new claims 31 and 32.

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Claims 1 through 17 (Cancelled)

18. (Currently amended) A process for the bacterial oxidation of sulphide ores and concentrates characterised in that the ore or concentrate is leached ~~at a grind or crush size of greater than  $P_{80}$  75  $\mu\text{m}$  with~~ using a bacterial culture not indigenous to that ore or concentrate and operative across a temperature range of about 40 to 65°C, the bacterial culture having been adapted to the ore or concentrate prior to leaching by exposure to a sample of the ore or concentrate wherein the subsequently adapted bacterial culture is then removed from that sample of ore or concentrate and exposed to the ore or concentrate to be leached.

19. (Previously amended) A process according to claim 18, characterised in that the leach is conducted in a form selected from the group consisting of:

- a heap leach,
- a tank leach,
- a vat leach, and
- a dump leach.

20. (Previously amended) A process according to claim 18, characterised in that the ore or concentrate contains a metal selected from the group consisting of:

- a base metal,
- a precious metal, and
- a platinum group metal.

21. (Original) A process according to claim 18, characterised in that the sulphide ore or concentrate contains chalcopyrite.

22. (Original) A process according to claim 18, characterised in that the leach takes place in the temperature range of about 45 to 65°C.

23. (Cancelled)

24. (Previously amended) A process according to claim 18, characterised in that the grind or crush size is greater than  $P_{80}$  90  $\mu\text{m}$ .

25. (Previously amended) A process according to claim 18, characterised in that the mixed bacterial culture comprises at least two of *Sulfobacillus thermosulfidooxidans*, *Thiobacillus caldus*, and *Thiobacillus ferrooxidans*.

26. (Previously amended) A process according to claim 18, characterised in that the process of adaptation comprises the addition of both a sample of the ore or concentrate and the bacterial culture to a leach vessel, and leaching a resulting adaptation slurry until a level of a targeted metal reporting to solution either reaches 100% or reaches a plateau.

27. (Currently amended) A bacterial culture for use in the ~~bacterial oxidation process of sulphide ores and concentrates~~ claim 18, characterised in that the bacterial culture is not indigenous to the ore or concentrate to be oxidised, the bacterial culture being able to oxidise the ores or concentrates ~~at grind or crush sizes equal to or greater than  $P_{80}$  75  $\mu\text{m}$~~  across a range of leach temperatures of about 40 to 65°C, and at a pH of between about 0.5 to 3.0.

28. (Previously amended) A bacterial culture according to claim 27, characterised in that the culture comprises at least two of *Sulfobacillus thermosulfidooxidans*, *Thiobacillus caldus*, and *Thiobacillus ferrooxidans*.

29. (Previously amended) A bacterial culture according to claim 27, characterised in that the ore or concentrate is a chalcopyrite mineral.

30. (Previously amended) A bacterial culture according to claim 27, characterised in that the grind or crush size is equal to or greater than  $P_{80}$  90  $\mu\text{m}$ .

31. (New) A bacterial culture according to claim 27, characterised in that the grind or crush size is equal to or greater than  $P_{80}$  75  $\mu\text{m}$ .

32. (New) A process according to claim 18, characterised in that the grind or crush size is greater than  $P_{80}$  75  $\mu\text{m}$ .

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